ipd1000NDCmdbmanipTES-10

Non-DII COE Installation Procedures (IP) for the METOC Database Manager (MDBMAN) Segment of the Tactical Environmental Support System Next Century [TESS(NC)] Meteorology and Oceanography (METOC) Database

Document Version 1.0

15 December 1998

Prepared for:
Naval Research Laboratory
Marine Meteorology Division
Monterey, CA
And
Fleet Numerical Meteorology and Oceanography Center
(FNMOC)
Monterey, CA

Prepared by:
Integrated Performance Decisions
Middletown, RI

Table of Contents

List of Figures

1 SCOPE

1.1 Identification

These Installation Procedures (IP) describe the installation of the Meteorology and Oceanography (METOC) Database Manager (MDBMAN) segment, Version 1.2 series, of the Tactical Environmental Support System Next Century [TESS(NC)] METOC Database. The MDBMAN segment provides the ability to purge and archive various types of METOC data from the database. In addition, the segment allows for METOC data archived to a tape or hard disk to be retrieved and restored into the database.

1.2 System Overview

The software described in this document forms a portion of the METOC Database component of the TESS(NC) Program (Navy Integrated Tactical Environmental Subsystem (NITES) Version I). On 29 October 1996, the Oceanographer of the Navy issued a TESS Program Policy statement in letter 3140 Serial 961/6U570953, modifying the Program by calling for five seamless software versions that are Defense Information Infrastructure (DII) Common Operating Environment (COE) compliant, preferably to level 5.

The five versions are:

- NITES Version I — The local data fusion center and principal METOC analysis and forecast system (TESS(NC))
- NITES Version II — The subsystem on the Joint Maritime Command Information System (JMCIS) or Global Command and Control System (GCCS) (NITES/Joint METOC Segment (JMS))
- NITES Version III — The unclassified aviation forecast, briefing, and display subsystem tailored to Naval METOC shore activities (currently satisfied by the Meteorological Integrated Data Display System (MIDDS))
- NITES Version IV — The Portable subsystem composed of independent PCs/workstations and modules for forecaster, satellite, communications, and Integrated Command, Control, Communications, Computer, and Intelligence Surveillance Reconnaissance (IC4ISR) functions (currently the Interim Mobile Oceanographic Support System (IMOSS))
- NITES Version V — Foreign Military Sales (currently satisfied by the Allied Environmental Support System (AESS))

NITES I acquires and assimilates various METOC data for use by US Navy and Marine Corps weather forecasters and tactical planners. NITES I provides these users with METOC data, products, and applications necessary to support the warfighter in tactical operations and decision making. NITES I provides METOC data and products to NITES I and II applications, as well as non-TESS(NC) systems requiring METOC data, in a heterogeneous, networked computing environment.

The TESS(NC) Concept of Operations and system architecture require that the METOC Database be distributed both in terms of application access to METOC data and products and in terms of physical location of the data repositories. The organizational structure of the database is influenced by these requirements, and the components of this distributed database are described below.

In accordance with DII COE database concepts, the METOC Database is composed of six DII COE-compliant *shared database* segments. Associated with each shared database segment is an Application Program Interface (API) segment. MDBMAN interfaces with both the API and Database segments on the client/server platform as follows:

Data Type	**Data Segment**	**API Segment**
Grid Fields	MDGRID	MAGRID
Latitude-Longitude-Time (LLT) Observations	MDLLT	MALLT
Textual Observations and Bulletins	MDTXT	MATXT
Remotely Sensed Data	MDREM	MAREM
Imagery	MDIMG	MAIMG
Climatology Data	MDCLIM	MACLIM

A typical client-server installation is depicted in Figure 1-1. This shows the shared database segments residing on a DII COE database server, with a NITES I or II client machine hosting the API segments. The MDBMAN segment will interface directly with the server platform. Communication between API segments and shared database segments is accomplished over the network using ANSI-standard Structured Query Language (SQL).

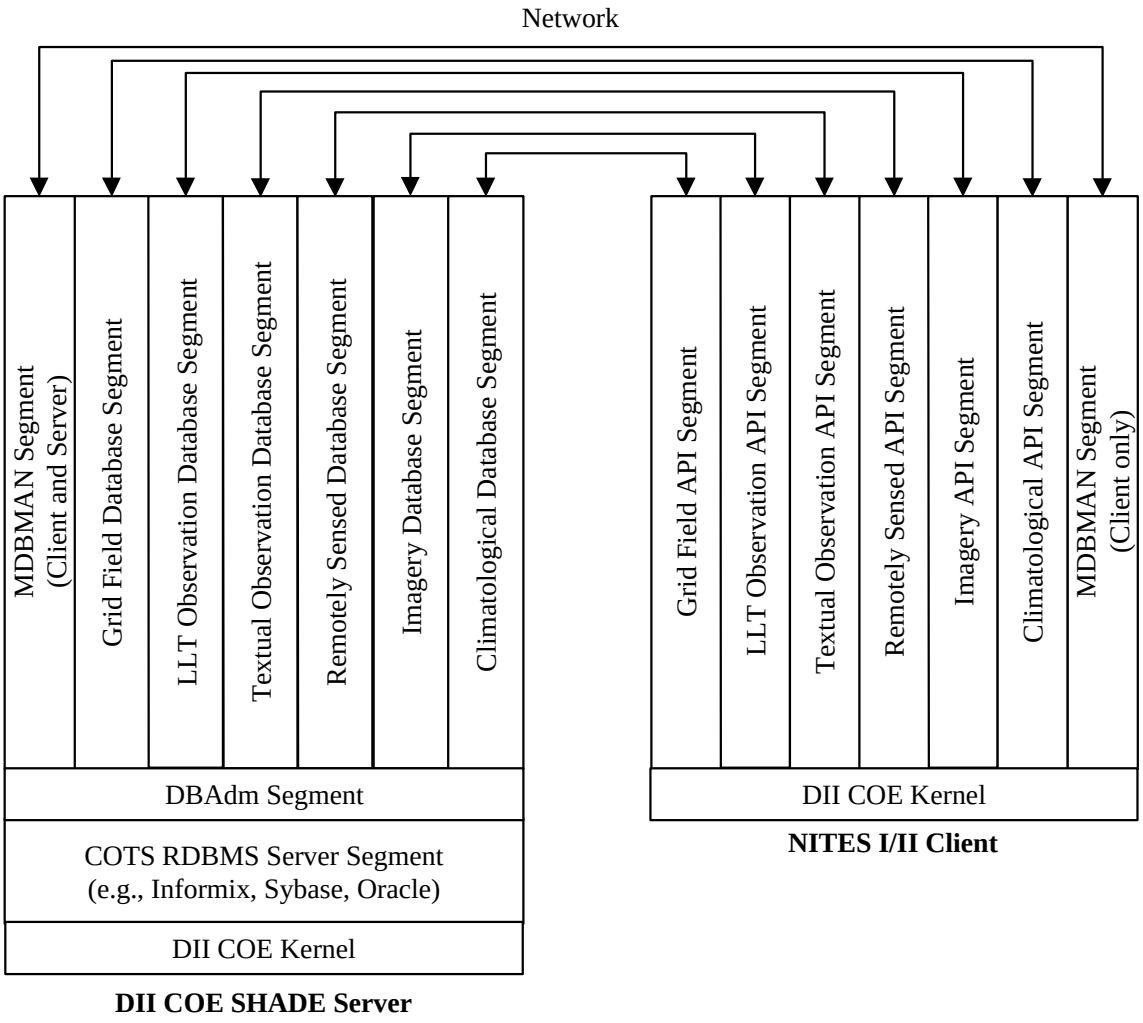

Figure 1-1. TESS(NC) METOC Database Conceptual Organization

The MDBMAN segment interfaces directly with the API and database segments provided on the database server machine. The MDBMAN windows and screens provide easy operation for the user to purge and archive various types of METOC data from the database and retrieve data that have been previously archived to a tape or other media. This interface is easily accessible through logging in as DBAdmin on the TAC-3/TAC-4 Systems, or through the Program's menu on the PC Windows NT/4.0 system.

2 REFERENCED DOCUMENTS

2.1 Government Documents

STANDARDS

MIL-STD-498 5 December 1994	*Software Development and Documentation*

SPECIFICATIONS

Unnumbered 30 September 1997	*Software Requirements Specification for the Tactical Environmental Support System/Next Century [TESS(3)/NC] Meteorological and Oceanographic (METOC) Database*, Space and Naval Warfare Systems Command, Environmental Systems Program Office (SPAWAR PMW-185), Washington, DC
Unnumbered 5 December 1997	*Performance Specification (PS) for the Tactical Environmental Support System/Next Century TESS(3)/NC (AN/UMK-3)*

OTHER DOCUMENTS

ipd1000mdbmansrsTES-10 December 1998	*Software Requirements Specification (SRS) for the METOC Database Manager (MDBMAN) Segment of the Tactical Environmental Support System Next Century [TESS(NC)] Meteorology and Oceanography (METOC) Database*

3 SYSTEM ENVIRONMENT

3.1 System Requirements

3.1.1 Hardware Requirements

The MDBMAN software is hosted on a Sun Workstation.

The following configurations are recommended:

RAM: 128 MB minimum, 192 MB optimum
Disk Space: 2 GB
Swap Space: 300 MB

3.1.2 Operating System Requirements

Solaris 2.6

3.2 System and Site Preparations

3.2.1 System Configuration

The following software must be properly installed prior to loading the MDBMAN software:

- Appropriate operating system (as described above)

3.2.2 Operating System Preparation

Information needed to prepare the operating system is found in Solaris-supplied documentation.

3.2.3 Tape/Disk Preparation

The MDBMAN software is delivered on a 4-mm DAT cartridge for the Sun Workstation hardware environment.

4 INSTALLATION INSTRUCTIONS

The following procedures describe the installation of the MDBMAN software.

4.1 Installation

NOTE: Prior to segment installation, ensure that no existing MDBMAN software is already installed on the target platform. If so, run the /usr/local/METOCAPPS_INFO/uninstall.MDBMAN script to remove the existing version. The operator must be root to run the uninstall script.

4.1.1 Media Booting Procedures for Sun Workstation Systems

To prepare a tape for installation:

1. Insert the tape in the DAT drive.

2. Log in as root.

3. Extract the installation script from the tape using tar –xvf <tape device name>

4.1.2 Installation Procedures for Sun Workstation Systems

For MDBMAN to be installed, the system must have all of the API segments (MAGRID, MALLT, MAIMG, MATXT); all of the database segments do not have to be installed. Also in order for MDBMAN to run the segments, JAVART and JMuddR have to be installed. For MDBMAN's online help to work, Netscape must be installed on the workstation, and it must be added to the path of the user that will be running MDBMAN.

To install the MDBMAN software:

1. Invoke the extracted MDBMAN install script

   ./install.MDBMAN

2. Enter the NO-REWIND tape device name, or press the **ENTER** key to select the default value displayed in the braces. The default value is */dev/rmt/0m*.

3. After the tape device name is entered, a description of the segment to be installed is displayed. If this is the correct segment, enter '*y*' or press the ENTER key to accept the

default value. If the description of the segment is not the segment to be installed, enter '*n*', and the installation procedure is stopped. The default value is 'y'.

4. If 'y' was entered in the above step, you will need to specify the path where the segment is to be installed. Remember to end the path with the name of the segment in capital letters (e.g., /home/MDBMAN). The default value is /h/MDBMAN.

5. If the directory specified above does not exist, the installation will create it for you if you choose. If you want the directory created, enter 'y' at the prompt, or select the default by pressing the **ENTER** key. If you don't want the installation script to create the directory, enter 'n' at the prompt. This will stop the installation process, and you will have to create the directory manually.

6. Once the directory has been created, you will be prompted to continue with the installation. If you wish to continue, either enter 'y' or select the default value by pressing the **ENTER** key. If you do not wish to continue the installation, enter 'n' at the prompt.

7. The script will proceed to install the segment to the directory that was specified. While the script is finishing up, it will create a new directory under */usr/local* called METOCAPPS_INFO. This is where it will place two files, an uninstall script and an info file about the segment.

8. After the installation is finished, the system must be rebooted in order for the MDBMAN server to start. To reboot the system, type **reboot** at the command line.

9. To start MDBMAN, change the directory to where MDBMAN was installed. Go to the bin directory under the MDBMAN directory. Once there, type *./MDBMAN_client&*. The MDBMAN client window will appear. For further instructions on how to use MDBMAN, refer to the Software User's Manual (SUM) for MDBMAN or the online help. This completes the installation of the MDBMAN software.

4.2 Installation of Upgrades

Installation of upgrades will generally follow the same procedures listed above.

4.3 Installation Verification

Verify that the MDBMAN directory resides in the path specified in the installation procedure.

4.4 Initializing the Software

This section is tailored out. No initialization of the software is required.

4.5 List of Changes and Enhancements

This section is tailored out.

4.6 Important Considerations

This section is tailored out.

5 NOTES

5.1 Glossary of Acronyms

AESS	Allied Environmental Support System
API	Application Program Interface
COE	Common Operating Environment
DII	Defense Information Infrastructure
FNMOC	Fleet Numerical Meteorology and Oceanography Center
GCCS	Global Command and Control System
IC4ISR	Integrated Command, Control, Communications, Computer, and Intelligence Surveillance Reconnaissance
IMOSS	Interim Mobil Oceanographic Support System
IP	Installation Procedures
JAVART	JAVA Runtime Segment
JMCIS	Joint Maritime Command Information System
JMS	Joint METOC Segment
JMuddR	JMudd Runtime Segment
LLT	Latitude-Longitude-Time
MAGRID	Grid Field API Segment of the TESS(NC) METOC Database
MAIMG	Imagery API Segment of the TESS(NC) METOC Database
MALLT	LLT Observation API Segment of the TESS(NC) METOC Database
MATXT	Textual Observation API Segment of the TESS(NC) METOC Database
MDBMAN	METOC Database Manager Segment
METOC	Meteorology and Oceanography

MIDDS	Meteorological Integrated Data Display System
NITES	Navy Integrated Tactical Environmental Subsystem
PS	Performance Specification
SQL	Structured Query Language
SRS	Software Requirements Specification
SUM	Software User's Manual
TESS(NC)	Tactical Environmental Support System Next Century